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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CONNOLLY, MARK A

ART UNIT PAPER NUMBER

2115

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,298

Applicant(s)

MAGEN, MICHA

Examiner

Mark Connolly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7-16 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-16 have been presented for examination.

Oath/Declaration

2. It does not identify the city and either state or foreign country of residence of each inventor. The residence information may be provided on either on an application data sheet or supplemental oath or declaration.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 3, 9, 12, 13 and 15 are rejected under 35 U.S.C. 1023(b) as being anticipated over Kingsbury US Pat No 4179670.

5. Referring to claim 1, Kingsbury teaches the method comprising:

- a. frequency dividing a high frequency clock signal into a divided frequency [figs. 1-2, col. 1 lines 56-57 and col. 3 lines 46-48]. A 50 MHz clock is interpreted as a high-frequency clock.
- b. further dividing said divided frequency into another divided frequency in accordance with a data input [figs. 1 and col. 3 lines 48-56].

6. Referring to claim 2, Kingsbury teaches that the further dividing comprises a multi-bit counter that receives and divides according to the DIN [col. 3 lines 48-56 and col. 4 lines 20-39].

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7. Referring to claim 3, Kingsbury teaches that the further dividing is controlled by the external input value [col. 3 lines 50-52]. The external input value is interpreted as DIN.

8. Referring to claim 9, this is rejected on the same basis as set forth hereinabove. Kingsbury teaches the method and therefore teaches the apparatus performing the method.

9. Referring to claim 12, because the dividing ratio M in the programmable frequency divider can equal a value other than 0 and 1 (i.e. 161) it is interpreted that DIN is a multi-bit input [col. 4 line 35].

10. Referring to claim 13, Kingsbury teaches logic circuitry which adjusts the precision of the count by adding to the value M [col. 4 lines 20-32].

11. Referring to claim 15, this is rejected on the same basis as set forth hereinabove. Kingsbury teaches the method and therefore teaches the apparatus performing the method.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingsbury as applied to claims 1, 2, 3, 9, 12, 13 and 15 above.

14. Referring to claim 7, although Kingsbury teaches a programmable frequency divider, it is not explicitly taught that the programmable frequency divider comprises flip-flops. Rather, all that is suggested is that the programmable frequency divider comprises a counter [col. 3 lines 48-

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52]. It is well known that counters comprise flip-flops to read in and store a count value and it would have been obvious to one of ordinary skill to include those flip-flops into the programmable frequency divider/counter taught in the Kingsbury system because it would provide a means to read in and store dividing ratio M.

15. Referring to claim 14, Kingsbury teaches that the control logic circuitry stores a value n [col. 4 lines 20-32]. Even though Kingsbury does not explicitly teach that the storing is performed by a flip flop it would have been obvious to perform the storing with flip flops because flip flops are well known storage devices which perform in a manner required by the Kingsbury system.

16. Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingsbury as applied to claims 1, 2, 3, 9, 12, 13 and 15 above, and further in view of Foroudi et al [Foroudi] Low-voltage low-power topology for high-speed applications.

17. Referring to claim 10, although Kingsbury teaches a frequency divider, it is not explicitly taught that the frequency divider is a dual modulus frequency divider. Foroudi explicitly teaches a dual modulus frequency divider [abstract]. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a dual modulus frequency divider as the frequency divider in Kingsbury because Foroudi explicitly teaches that the dual modulus frequency divider “can operate at lower supply voltages” [abstract].

18. Referring to claim 16, this is rejected on the same basis as set forth hereinabove.

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19. Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingsbury as applied to claims 1, 2, 3, 9, 12, 13 and 15 above, and further in view of Huges US Pat No 4315166.

20. Referring to claim 8, although Kingsbury teaches a frequency divider, it is not explicit on the makeup of the frequency divider and therefore does not explicitly teach that the frequency divider comprises a D-type flip-flop [DFF] that feeds its Q-bar into its data input. Huges teaches a D-type flip-flop which acts as a frequency divider which feeds its Q-bar into its data input [fig. 8 and col. 5 lines 48-50]. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the DFF as the fixed frequency divider in Kingsbury because Kingsbury only specifies that the dividing ratio P in the fixed frequency divider must be an integer value greater than 1 and Huges teaches that the DFF has a dividing ratio of 2.

21. Referring to claim 11, this is rejected on the same basis as set forth hereinabove. Kingsbury and Huges teach the method and therefore teach the apparatus performing the method.

Allowable Subject Matter

22. Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Connolly whose telephone number is (571) 272-3666. The examiner can normally be reached on M-F 8AM-5PM (except every first Friday).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Connolly
Examiner
Art Unit 2115

mc
December 1, 2004


